



Rescue of Mottled Wood Owl (*Strix ocellata*) in Jhansi district, Uttar Pradesh

Devendra Kumar¹, Sonika Kushwaha^{2✉}, Akhilesh Kumar², Abhishek Namdev²

1. CCF-Bundelkhand, Forest Department, Uttar Pradesh, India

2. Indian Biodiversity Conservation Society, Jhansi, Uttar Pradesh, India

✉Corresponding author:

Indian Biodiversity Conservation Society (Bhartiya Vaiv Vividhta Sanrakshan Sansthan), Jhansi, Uttar Pradesh: E-mail: ibcsforall@gmail.com

Article History

Received: 08 September 2020

Accepted: 22 October 2020

Published: October 2020

Citation

Devendra Kumar, Sonika Kushwaha, Akhilesh Kumar, Abhishek Namdev. Rescue of Mottled Wood Owl (*Strix ocellata*) in Jhansi district, Uttar Pradesh. *Species*, 2020, 21(68), 316-324

Publication License



© The Author(s) 2020. Open Access. This article is licensed under a [Creative Commons Attribution License 4.0 \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).

General Note



Article is recommended to print as color digital version in recycled paper.

ABSTRACT

Birds are vital link in nature's chain; this justifies their importance. Birds are directly or indirectly functional in the day to day life of man. Owls, the nocturnal birds of prey are amongst the one of the most beneficial aves due as they feed mainly on small mammals. They are friends of farmers and an essential part of the ecosystem. India is an abode of 30 owl species. Unfortunately 15 owl species have been recorded in owl trade. Uttar Pradesh ranks highest in owl trade in India. A juvenile of Mottled Wood Owl (*Strix ocellata*) was rescued from Babina region of Jhansi district in Uttar Pradesh on 3rd June 2016. After taking care for 3 months (2nd September 2016); till it learnt to take long flights, it was released back to its natural habitat. The case revealed the use of owls in folk medicines in the region. Further investigations revealed the demand of owls by the local people for street performances in villages, black magic and folk medicines. This case study further led to address key research issues such as occurrence of owl species and their habitat utilization. This in turn will lead to conservation, management of human activities, education, and implementation in future.

Key words: Birds, Owls, folk medicines, conservation

1. INTRODUCTION

Birds are vital link in nature's chain; this justifies their importance. Birds are directly or indirectly functional in the day to day life of man. Owls, the nocturnal birds of prey are amongst the one of the most beneficial Aves as they feed mainly on small mammals that are harmful for crops. They are friends of farmers and an essential part of the ecosystem. India is an abode of 30 owl species (Grimmett *et al.*, 2011). Owls live in diverse habitats, ranging from deserts to forests, including human habitations. However, despite their ubiquity they are confined and difficult to seen. They feed on small mammals, birds, frogs, lizards and insects and are at the peak of the food chain. Unfortunately 15 owl species have been recorded in owl trade. Mottled Wood owl is uncommon in the region. It is encountered with less than 50% certainty in preferred habitat. Uttar Pradesh ranks highest in owl trade hotspots and routes (http://support.wwfindia.org/lks/owls_fact.pdf). In India, owls hold a significant place in Hindu mythology as they are the *vahana* of Goddess laxmi. Despite this, the black magic practitioners prescribe the use of owl parts such as the skull, feathers, ear tufts, claws, heart, liver, kidney, blood, eyes, fat, beak, tears, eggshells, meat and bones for ceremonial *pujas* and rituals, often aimed at creating overnight wealth. Above and beyond black magic, owls are also used for street performances, zoos, and folk medicines. Along with from these uses, owl meat is eaten by certain communities in Indian States such as Andhara Pradesh and Telangana. (support.wwfindia.org/lks/owls_fact.pdf).

2. STUDY AREA

The case study is of Prithvipur Naya Kheda, Kataila Muhalla in Babina Jhansi (Fig.1). Jhansi is situated between the rivers Pahunj and Betwa between North longitudes 24°11' and 25°57' and East latitudes 78°10' and 79°25'. It has an average elevation of 284 metres (935 feet). Jhansi district is rocky with undulating topology; a lower proportion of its Total Geographical Area is under agriculture i.e 70%. Approximately 7% of the area is under forest, a bulk of which is degraded forest. The district also has a lower proportion of wastelands (16.95%). ha being classified as "land with scrubs". The average annual rainfall is 850.1mm. The climate is sub-humid and it is characterized by a hot dry summer and cold winter.

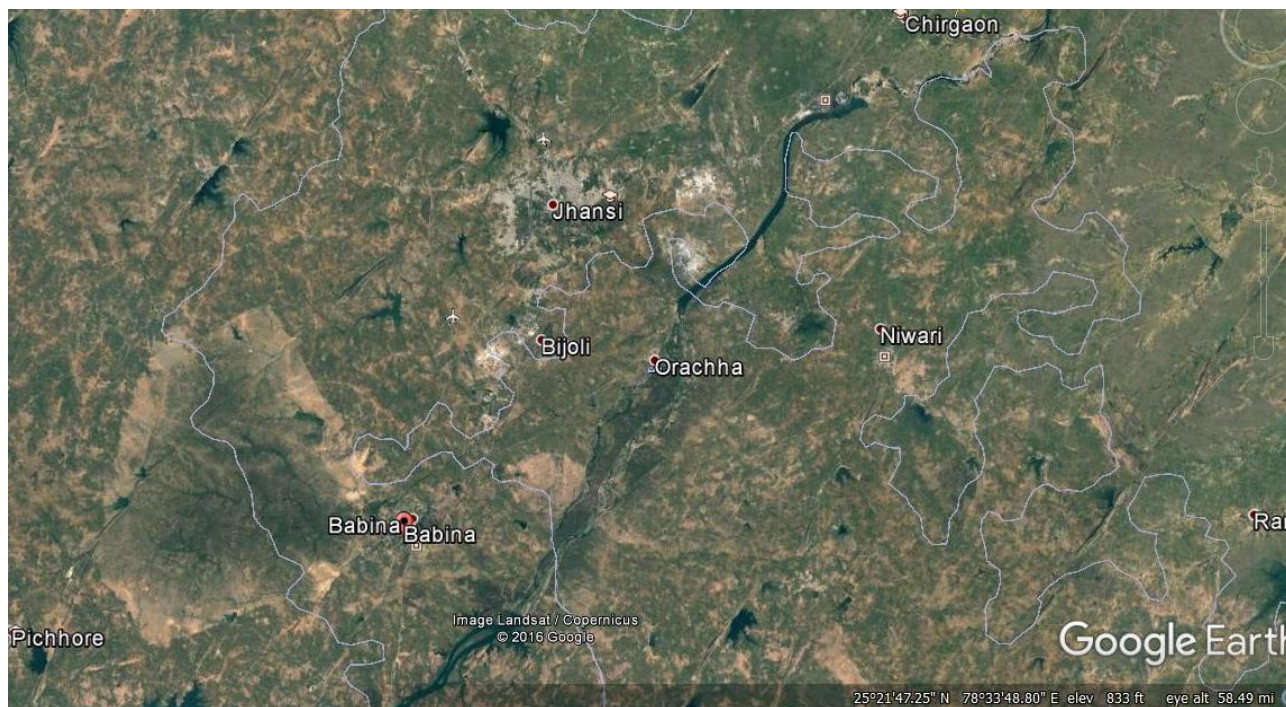


Figure 1 Map of study site (Babina in Jhansi)

3. METHODOLOGY

The juvenile was kept in a large cage so as to protect it from cats. The cage was also kept hanging instead of keeping on the ground, to keep away ants and other ground insects. The juvenile was kept away from any sort of disturbance from human presence. The cage was cleaned on alternate days. It was fed on chicken, fish and soya granules. The daily diet comprised of 30-50 gm chicken or fish daily; while 6-8 soya granules on alternate days. Initially it was given ORS/water with glucose and later simple water through syringe. It was taken out daily in early mornings or late evenings so that it remained familiarized to its nocturnal behavior.

4. RESULT AND DISCUSSION

On 3rd June our team got information about an owl being caught by the tribal community in Babina region of Jhansi district in Uttar Pradesh (Fig.2). A volunteer informed that the owl was tied and kept in the house of the person who caught it. The owl was identified as three months old Mottled Wood Owl (*Strix ocellata*). It is a species of large owls found in India. This species is Rare endemic breeding resident through most of peninsula and Gangetic plains, except in east. The juvenile lacked ear tufts. It was mottled, vermiculated reddish brown and white. The facial disc was marked with fine concentric black and white barring. The chin was white. The fore-neck had a white half-collar. The eyelid was orange and the iris was dark brown. The tail was barred narrowly in brown and black. The concentric barring on the face and mottled crown separated it from the brown wood owl. There was large amount of yellowish buff in wings (Fig.3).



Figure 2 Owl being caught by the tribal community in Babina region of Jhansi

The Mottled Wood owls are crepuscular and nocturnal, known to roost in the day, usually in pairs. When disturbed they may fly in bright sunshine although they choose to shelter within thickly foliated trees. They are difficult to observe, so their distinctive calls are helpful. They produce an eerie *chuhua-aa* call with a quaver in the second note. This call is an antiphonal duet of the male and female. The male calls once or twice followed by the female's shorter and less tremulous version. The calling is more frequent in November i.e. the onset of breeding period. Most Nests are found from February to April. They also produce a single note hoot and a screech not unlike that of the barn owl. The nest is a tree hollow in which two to three white eggs are laid (Ali and Ripley 1981; Rasmussen and Anderton, 2005; Grewal and Pfister, 2013)

It was rescued by the IBCS (Indian Biodiversity Conservation Society) team from the tribal. The community was made aware that it is illegal and crime to capture and kill wildlife (Fig.4). They were made sentient regarding the ecological roles of owl and how they are an important asset to the farmers. Moreover, they were made to understand that the health problems could not be cured by using the owl parts. They were encouraged to consult the doctors for the health issues. The IBCS team members provided them the contact numbers in case they needed any sort of help for the doctors and medicines. The Juvenile was then taken to the Forest Office, Jhansi to inform about the incident. With due permission, the juvenile was taken care of by the IBCS members.

The juvenile was kept in a large cage, big enough for it to move about freely (Fig.5a). The cage was kept hanging so as to keep it away from cats as well as ants that may cause irritation to the juvenile (Fig.5b). For the first two days the juvenile was very inactive and showed no movement even when kept in open. It was given ORS with the help of syringe. In the starting the juvenile took no food. It was fed with hands for the first four days i.e. 3-06-2016 to 6-06-2016 (Fig.6a). Later feeding was then done with the help of

forceps (Fig.6b). It was given 30 gm chicken (without any bones) in morning and evening for the next 10 days (7-06-2016-17-06-2016). After 17th June it was fed only at evening on 50 gm of chicken or fish. It consumed about 15-20 ml of water at a time. Water was given thrice in a day. After 10 days i.e. 27th June 2016 it took little food on its own.



Figure 3 Juvenile of Mottled Wood Owl (*Strix ocellata*).



Figure 4 The community was made aware that it is illegal and crime to capture and kill wildlife



Figure 5a The juvenile was kept in a large cage, big enough for it to move about freely



Figure 5b The cage was kept hanging for safety.



Figure 6a It was fed with hands for the first four days



Figure 6b Later feeding was done with the help of forceps



Figure 7 Pellet formed by the juvenile



Figure 8 Owls have very powerful talons



Figure 9a Juvenile without feathers on legs



Figure 9b Juvenile with soft feathers on legs

It was then fed on chicken having bones. Owls, like all other birds, cannot chew their food. Thus, the juvenile swallowed the chicken/fish pieces as whole. The problem with this system is that indigestible parts of the animal are also consumed. To effectively rid their digestive tracts of indigestible materials such as bones and fur, owls regurgitate what are commonly known as “owl pellets.” Within several hours of consuming a meal, indigestible materials are compacted into small oblong pellets comprised mainly of bone and fur, and eventually expelled through the mouth (Owls of Ohio, 2006). The juvenile also formed pellet that comprised of only bones since the chicken pieces had only bones with no feathers (Fig.7). The juvenile started feeding on its own from 4th July 2016. It used its powerful talons and bill to intake the food. As befits predators near the top of the food chain, owls have very powerful talons that allow them to forcefully seize prey (Fig.8).



Figure 10 The flight taking session at dawn and dusk

Like many species, the legs and feet of Mottled Wood owl are fully feathered. The juvenile when found had no feathers on its legs, but slowly developed soft feathers on its legs (Fig.9 a & b). This is perhaps principally an adaptation for cold weather, but these feathers may also assist them to “feel” their prey and make speedy adjustments if needed. Each foot has four talons; three faces forward and one backwards, generating an extremely successful noose. Their bills are also potent and hooked, and the owl can make use of immense power with it. Once gripped by the juvenile, the chicken piece could not be removed by its firm grip. By mid-July, the juvenile became more active and showed attacking postures in cage. At dusk i.e 7 pm and dawn i.e 5 am, the juvenile produced an array of calls, consisting of a series of deep hoots. It also had a whistled screech. Mottled owls have been observed to have an enlarged voice box which allows them to produce low-pitched notes for their size (Gerhardt, 1991). Listening to these vocal calls, 2-4 Spotted owlets use to come and sit on the house walls, close to the cage of the juvenile. The Diet plan also changed. It was fed on

alternate days on 50-60 gm chicken/fish. It was also given Soya granules soaked in water to provide it protein rich diet. The juvenile avoided the food intake on rainy days and took the food on alternative days.



Figure 11 Mobbing of Juvenile by crows while it learnt to fly



Figure 12 Mottled Wood Owl released back to its natural habitat on 2nd September 2016

Seeing the activities and activeness of the juvenile, it was decided to realize it back to the natural habitat. On 23rd July it was decided to set free and kept in the open before taking it to the realize site. But instead of flying; the juvenile tried to hide and only walked towards the corners. So it was decided to re-introduce it after few more days. From the next day i.e 24th July, we started to train it to take flights. It was taken out during early morning and late evening, so that it remained familiar to its habits and learn without problems (Fig.10). They are known to perch silently during the day in dense canopy of large tall trees (Pande, 2012). The Juvenile was made to stretch out its wings and fly from small heights. It also learnt to balance itself. While taking the flight lessons, the juvenile was generally not well thought of by its avian brethren, and the miserable juvenile, whenever discovered by other birds particularly the house crow and tree pie, was bothered ruthlessly (Fig.11). The crows are well known for this, and when they find a roosting great horned owl, their loud cawing reaches a fevered, almost maniacal pitch. These calls draw in other crows, and sometimes quite mob forms (Owls of Ohio, 2006).

Finally, the juvenile learnt flying; it took a long flight on 24th August 2016, from one roof top to another. The flight was silent, with the wings being adapted to dampen sound during flight. This feature is helpful to approach the prey silently. So after taking care for 3 months (3rd June 2016 to 2nd September 2016); till it learnt to take long flights, it was released back to its natural habitat on 2nd September 2016 (Fig.12). The case revealed the capture and use of owls in folk medicines in the region. Owls are killed and their body parts used or sold for folk medicines. The feathers, bones and claws are considered an important ingredient for medicines as well as for the rituals in black magic, whilst the meat is used for curing a variety of ailments (Behl, 1995). Owls and their body parts are primarily used for black magic (Ahmed, 1999 and 2004).

5. CONCLUSION

Further investigations revealed the demand of owls by the local people for street performances in villages, black magic and folk medicines. There is an urgent need to create awareness regarding the illegality of using owls and their body parts. The local people need to be interacted and can be involved in the *in-situ* conservation of owls. This case study further lead to address key research issues such as occurrence of owl species and their habitat utilization. This in turn will lead to conservation, management of human activities, education, and implementation in future.

SUMMARY OF RESEARCH

1. Birds are vital link in nature's chain; this justifies their importance. Birds are directly or indirectly functional in the day to day life of man. Owls, the nocturnal birds of prey are amongst the one of the most beneficial Aves as they feed mainly on small mammals that are harmful for crops.
2. Uttar Pradesh ranks highest in owl trade hotspots and routes. The black magic practitioners prescribe the use of owl parts such as the skull, feathers, ear tufts, claws, heart, liver, kidney, blood, eyes, fat, beak, tears, eggshells, meat and bones for ceremonial *pujas* and rituals, often aimed at creating overnight wealth.
3. On 3rd June our team got information about an owl being caught by the tribal community in Babina region of Jhansi district in Uttar Pradesh. The owl was identified as three months old Mottled Wood Owl (*Strix ocellata*).
4. After taking care for 3 months (3rd June 2016 to 2nd September 2016); till it learnt to take long flights, it was released back to its natural habitat on 2nd September 2016. The case revealed the capture and use of owls in folk medicines in the region.
5. Further investigations revealed the demand of owls by the local people for street performances in villages, black magic and folk medicines. There is an urgent need to create awareness regarding the illegality of using owls and their body parts. The local people need to be interacted and can be involved in the *in-situ* conservation of owls.

FUTURE ISSUES

There have been very few studies on owl species in Uttar Pradesh. In actual fact no studies or research projects have been undertaken in Bundelkhand region of Uttar Pradesh. So the prospect is to address key research issues such as occurrence, distribution of owl species and their habitat utilization. This sequentially will lead to management and administration of human activities that show the way to owl sacrifices in the region.

DISCLOSURE STATEMENT

There is no financial support for this research work from any funding agency.

ACKNOWLEDGEMENT

The authors are thankful to the Forest Department Jhansi for their permission and co-operation in rescuing the Mottled Owl Juvenile. We would also like to thank Daya Sagar, volunteer (Indian Biodiversity Conservation Society) for informing about the incident. Authors acknowledged here, the published paper retracted from "Spring" journal; because the mentioned journal is discontinue the publication, so we republish the paper again with "Species" journal.

Funding:

This research received no external funding.

Conflicts of interest:

The authors declare no conflict of interest.

Peer-review:

External peer-review was done through double-blind method.

Data and materials availability:

All data associated with this study are present in the paper.

REFERENCES AND NOTES

1. Ahmed A. Fraudulence in Indian Live bird trade in India. An identification monograph for enforcement staff: An identification monograph. TRAFFIC India/ WWF India/Ministry of Environment and Forest, New Delhi, 1999
2. Ahmed A. Illegal Bird Trade (Pp 66 -70) in: Islam, M. Z. and Rahmani, A. R. Important Bird Areas in India: Priority sites for conservation. Indian Bird Conservation Network: Bombay Natural History Society and BirdLife International (UK), 2004.
3. Ali S, Ripley SD. Handbook of the Birds of India and Pakistan. 1981, 3 (2 ed.), 304–307.
4. Behl T. Chamatkari tantr Sandhana. Randhir Prakashan, Haridwar. 1995, 160- 176.
5. Grewal B, Pfister OA. Photographic Guide to Birds of the Himalayas. New Holland Publishers (UK) Ltd., 2013.
6. Grimmett R, Inskipp C, Inskipp T. Birds of the Indian Subcontinent. London: Oxford University Press 2011.
7. Grim future for owls - WWF: support.wwfindia.org/lks/owls_fact.pdf. Assessed on 17 April 2017
8. Pande S. Mottled Wood Owl, Ela Foundation, Pune, 2013, Ela File 2, 1-6.
9. Rasmussen PC, Anderton JC. Birds of South Asia. The Ripley Guide. 2005, Volume 2. Smithsonian Institution and Lynx Edicions.